

**REMARKS**

These amendment and remarks are filed in response to the Office Action dated January 6, 2009. For the following reasons this application should be allowed and the case passed to issue. No new matter is introduced by this amendment. The amendment to claims 15 and 18 are supported by Figs. 1 and 3 and the accompanying portions of the specification.

Claims 15-25 are pending in this application. Claims 15-25 have been rejected. Claims 15 and 18 are amended in this response. Claims 1-14 were previously canceled.

***Claim Rejections Under 35 U.S.C. § 103***

Claims 15-23 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sugita et al. (US 6,455,179) in view of Tanaka et al. (U.S. Pat. No. 6,803,142). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the present invention, as claimed, and the cited prior art.

An aspect of the invention, per claim 15, is a fuel cell assembly mounted in a vehicle comprising a fuel cell stack comprising plural fuel cells stacked in a fixed direction and a pair of end plates which are stacked on both ends of the plural fuel cells. A stacking bolt penetrates the pair of end plates in the fixed direction and maintains the plural fuel cells in a stacked state. A case houses the fuel cell stack, and a bolt penetrates an end plate and the case in a direction perpendicular to the fixed direction such that both ends of the bolt are located exterior to the case to support the fuel cell stack to the case.

Another aspect of the invention, per claim 18, is a fuel cell assembly mounted in a vehicle comprising a fuel cell stack comprising plural fuel cells stacked in a fixed direction. A stacking bolt is disposed along the fixed direction to maintain the plural fuel cells in a stacked state. A fluid supply/discharge block is fitted to an end of the fuel cell stack to supply fluid from

outside to each of the plural fuel cells and discharge fluid from each of the plural fuel cells to outside. A case houses the fuel cell stack and the fluid supply/discharge block, and a bolt penetrates the fluid supply/discharge block and the case in a direction perpendicular to the fixed direction such that both ends of the bolt are located exterior to the case to support the fuel cell stack to the case.

Sugita et al. and Tanaka et al., whether taken in combination, or taken alone do not suggest the claimed fuel cell assemblies because the cited references do not disclose a fuel cell stack comprising plural fuel cells stacked in a fixed direction, a case housing the fuel cell stack, and a bolt which penetrates an end plate and the case in a direction perpendicular to the fixed direction such that both ends of the bolt are located exterior to the case to support the fuel cell stack to the case, as required by claim 15; and a fuel cell stack comprising plural fuel cells stacked in a fixed direction, a fluid supply/discharge block, a case housing the fuel cell stack and the fluid supply/discharge block, and a bolt which penetrates the fluid supply/discharge block and the case in a direction perpendicular to the fixed direction such that both ends of the bolt are located exterior to the case to support the fuel cell stack to the case, as required by claim 18.

The bolt penetrating the end plate and the case or the fluid supply/discharge block in a direction perpendicular to the fixed direction, according the present invention, provides improved support of the structure of the fuel cell stack against a horizontal load acting between the fuel cell stack and the case not provided by fuel cell assembly of Sugita et al. and Tanaka et al.

For the Examiner's convenience, the present invention will be contrasted with Sugita et al. by referring to an embodiment depicted in Fig. 1 of the present invention and Fig. 2 of Sugita et al. Claim 15 requires that the bolt (8) penetrates an end plate (5) and the case (3, 11) in a

direction perpendicular to the fixed direction such that both ends of the bolt are located exterior to the case to support the fuel cell stack to the case. Claim 18 requires that the bolt (7) penetrates the fluid supply/discharge block (6) and the case (3, 11) in a direction perpendicular to the fixed direction such that both ends of the bolt are located exterior to the case to support the fuel cell stack to the case.

In Sugita et al., the bolt (166a(b)) penetrates the bracket (162a(b)), but does not penetrate the fluid supply/discharge block (28) nor the end plate (24). Further, Sugita et al. do not disclose a case housing the fuel cell stack, and hence does not disclose a bolt which penetrates the housing.

Tanaka et al. do not cure the deficiencies of Sugita et al. In Tanaka et al., the bolt (104) penetrates the bottom of the case (10) and reaches the interior of the end plate (62). However, the bolt (104) does not penetrates the end plate (62). Thus, both ends of the bolt are not located on the exterior of the end plate (62).

Therefore, neither Sugita et al. nor Tanaka et al. disclose a bolt which penetrates an end plate and the case in a direction perpendicular to the fixed direction such that both ends of the bolt are located on the exterior of the case to support the fuel cell stack to the case, as required by claim 15. With respect to the Claim 18, neither Sugita et al. nor Tanaka et al. disclose a bolt which penetrates the fluid supply/discharge block and the case in a direction perpendicular to the fixed direction such that both ends of the bolt are located on the exterior of the case to support the fuel cell stack to the case.

Obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge readily

available to one of ordinary skill in the art. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 22006); *In re Kotzab*, 217 F.3d 1365, 1370 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). There is no suggestion in Sugita et al. or Tanaka et al. to modify the fuel cell assembly of Sugita et al. so that it includes a bolt which penetrates an end plate and a case in a direction perpendicular to the fixed direction such that both ends of the bolt are located on the exterior of the case to support the fuel cell stack to the case, as required by claim 15; or a bolt which penetrates a fluid supply/discharge block and the case in a direction perpendicular to the fixed direction such that both ends of the bolt are located on the exterior of the case to support the fuel cell stack to the case, as required by claim 18, nor does common sense dictate such modifications. The Examiner has not provided any evidence that there would be any obvious benefit in making such modifications of Sugita et al. *See KSR Int'l Co. v. Teleflex, Inc.*, 500 U.S. \_\_\_\_ (No. 04-1350, April 30, 2007) at 20.

The only teaching of the claimed fuel cell assemblies is found in Applicant's disclosure. However, the teaching or suggestion to make a claimed combination and the reasonable expectation of success must not be based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 24 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sugita et al. in view of Tanaka et al. and further in view of Groppel (US 3,856,573). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The combination of Groppel with Sugita et al. and Tanaka et al. does not suggest the claimed fuel cell assemblies because Groppel does not cure the deficiencies of Sugita et al. and Tanaka et al. Groppel does not suggest a bolt which penetrates the fluid supply/discharge block

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and the case in a direction perpendicular to the fixed direction such that both ends of the bolt are located on the exterior of the case to support the fuel cell stack to the case, as required by claim 18.

The dependent claims are allowable for at least the same reasons as the independent claims from which they depend and further distinguish the claimed fuel cell assemblies.

In view of the above remarks, Applicant submits that this application should be allowed and the case passed to issue. If there are any questions regarding this response or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Bernard P. Codd

Registration No. 46,429

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 BPC:MWE  
Facsimile: 202.756.8087  
**Date: April 6, 2009**

**Please recognize our Customer No. 20277  
as our correspondence address.**